

B' could
said probe has a base sequence designed such that, when said probe is hybridized with said target nucleic acid, at least one G (guanine) base exists in a base sequence of said target nucleic acid at a position 1 to 3 bases apart from an end base portion where said probe and said target nucleic acid are hybridized with each other;

whereby said fluorescent dye is reduced in fluorescence emission when said probe is hybridized with said target nucleic acid, wherein said fluorescent dye is selected from the group consisting of BODIPY FL, BODIPY FL/C3, 6-joe, BODIPY TMR, BODIPY FL/C6, Alexa 488, and Alexa 532.

p2
5. (Twice Amended) A nucleic acid probe for determining a concentration of a target nucleic acid, said probe being labeled with a fluorescent dye, wherein:

said probe is labeled at an end portion thereof with said fluorescent dye, and

said probe has a base sequence designed such that, when said probe is hybridized with said target nucleic acid, base pairs in a probe-nucleic acid hybrid complex form at least one G (guanine) and C (cytosine) pair at said end portion;

whereby said fluorescent dye is reduced in fluorescence emission when said probe is hybridized with said target nucleic acid, wherein said probe can be further extended at its 3'-end by a DNA polymerase, wherein said fluorescent dye is selected from the group consisting of BODIPY FL, BODIPY FL/C3, 6-joe, BODIPY TMR, BODIPY FL/C6, Alexa 488, and Alexa 532.

B³
25. (Twice Amended) The device according to claim 23, wherein said probes or different probes bound on said surface of said solid support are each independently provided with at least one temperature sensor and at least one heater arranged on an opposite surface of said solid support such that an area of said solid support, where said probe or different probe is bound, can be controlled to meet optimal temperature conditions.

26. (Twice Amended) The device according to claim 23, wherein said probe or different probes are bound at end portions, where said probes or different probes are labeled with no fluorescent dye on said surface of said solid support.

47. (Amended) A nucleic acid probe for determining a concentration of a target nucleic acid, said probe being labeled with a fluorescent dye, wherein:

B⁴
said probe is labeled at an end portion thereof with said fluorescent dye, and
said probe has a base sequence designed such that, when said probe is hybridized with said target nucleic acid, base pairs in a probe-nucleic acid hybrid complex form at least one G (guanine) and C (cytosine) pair at said end portion;

whereby said fluorescent dye is reduced in fluorescence emission when said probe is hybridized with said target nucleic acid, wherein said probe has G or C as a 3' end base and is labeled at said 3' end thereof with said fluorescent dye, wherein said fluorescent dye is selected from the group consisting of BODIPY FL, BODIPY FL/C3, 6-joe, BODIPY TMR, BODIPY FL/C6, Alexa 488, and Alexa 532.

B⁵
50. (Amended) The nucleic acid probe according to claim 47, which comprises a chemically-modified nucleic acid.

B5
B6
B7
B8

51. (Amended) The nucleic acid probe according to claim 47, wherein an oligonucleotide of said probe is a chimeric oligonucleotide comprising a ribonucleotide and a deoxyribonucleotide.

56. (Amended) The device according to claim 55, wherein said probes or said different probes are arranged and bound in an array pattern on said surface of said solid support.

60. (Amended) A nucleic acid probe for determining a concentration of a target nucleic acid, said probe being labeled with a fluorescent dye, wherein:
said probe is labeled at an end portion thereof with said fluorescent dye, and
said probe has a base sequence designed such that, when said probe is hybridized with said target nucleic acid, base pairs in a probe-nucleic acid hybrid complex form at least one G (guanine) and C (cytosine) pair at said end portion;

wherein said fluorescent dye is reduced in fluorescence emission when said probe is hybridized with said target nucleic acid, wherein said probe has C as a 5' end base and is labeled at said 5' end thereof with said fluorescent dye, and a hydroxyl group of a 2' or 3' carbon of a ribose, or a 3' carbon of a deoxyribose at the 3' end of said probe is phosphorylated, wherein said fluorescent dye is selected from the group consisting of BODIPY FL, BODIPY FL/C3, 6-joe, BODIPY TMR, BODIPY FL/C6, Alexa 488, and Alexa 532.

64. (Amended) The nucleic acid probe according to claim 60, wherein an oligonucleotide of said probe is a chimeric oligonucleotide comprising a ribonucleotide and a deoxyribonucleotide.
